

## Montana Salinity Control Association

The Montana Salinity Control Association (MSCA) is a conservation district satellite program established to reclaim and prevent saline seeps and other agricultural-related water quality problems, on an individual farm and/or watershed basis. MSCA originated in 1979 in nine counties but has since expanded to serve 34 counties.

### MSCA Funding

- Base-line funding administered by the MT Dept. Natural Resources and Conservation (DNRC)/Conservation Districts Bureau (CDB) from coal tax revenue and General Fund.
- Competitive state and federal grants to address non-point source pollution (NPS) on a watershed basis.
- MSCA generates revenue through user-fees from agricultural producers and groups. The reclamation process contributes to the economic prosperity of the State's agricultural sector by improving production and bringing federal dollars for saline control implementation to the local economy.

Problem Scale: Conservative estimates indicate over 300,000 cropland acres in Montana were affected by salinity problems.

- MSCA has developed 1,235 individual reclamation plans to address salinized acres that were no longer productive. Each year MSCA receives requests from CDs, private landowners/operators, USDA Natural Resources Conservation Service (NRCS) personnel, irrigation districts, and watershed groups for technical assistance. While the geographical emphasis changes, the overall requests remain consistent indicating the need to maintain the MSCA technical assistance program.
- MSCA is involved in the organization of individual and watershed-scale saline projects working through local conservation districts, with assistance from the DNRC-Conservation & Resource Development Division (CARDD) staff.
- Eighteen salinity-based watershed projects ranging in size from 4,000 acres to over 625,000 acres are in progress or completed. MSCA provides significant technical assistance in these watersheds to complement overall benefits. Each watershed project has a local advisory group that contributes funds and/or provides coordination between landowners and technical agencies.
- Irrigation-based salinity projects initiated by MSCA involve producers, USDA-NRCS, Bureau of Indian Affairs (BIA), and irrigation districts/companies. Projects involve detecting seepage from irrigation infrastructure, implementing methods to reduce leakage, and improve irrigation efficiencies.

### Technical Assistance

- MSCA coordinates with state and federal agencies, including USDA and Environmental Protection Agency (EPA) to assist individual producers in implementing the remediation methods MSCA recommends to achieve saline reclamation.
- Utilize and adapt agency technical assistance and funding programs to address salinity (nonpoint source pollution) and other resource concerns. MSCA helped develop NRCS/USDA technical and financial assistance that is unique to Montana. A video documenting the MSCA field procedures and reclamation techniques for dryland salinity is available for USDA training purposes.
- MSCA works with watershed groups and conservation districts to develop reasonable and science-based Total Maximum Daily Load (TMDL) plans on specific watersheds. The EPA programs used are administered by MT Dept. of Environmental Quality (DEQ).

### International Cooperation and Recognition

- Strong relationship with Canadian provincial salinity specialists to share information through the Prairie Salinity Network.
- Similar cooperation has been established over the years through Australian research and landowner groups. MSCA staff participated in the International Salinity Forum in April 2005 and 2008, presenting information on successful dry-land saline reclamation in Montana.

Coal and Petroleum Exploration/production across Montana *creates the potential* for contamination of surface and ground water, and soil resources. MSCA works with watersheds, and private and public entities to differentiate saline conditions with chloride-based brine problems (oil/gas) from sulfate-based, locally-derived recharge. MSCA has experience with cases of soil, surface and ground water salinization from oil extraction activities.

- MSCA facilitates soil and water data collection prior to problems arising for baseline comparison, working with conservation districts, private landowners and individual well owners. It is important to preserve existing water quality for domestic, livestock and/or business use.
- MSCA coordinates with DNRC, MT Bureau of Mines & Geology, MT DEQ and private labs for field sampling techniques and appropriate chemical analyses. This service provides a third-party sampling process and analyses for baseline information, should any contamination occur later that might influence ground water quality or water table level.

### Education programs to agriculture entities, conservation districts, watershed groups

- Saline cause and effect, reclamation measures
- Water quality issues and soil health improvement
- Technical papers for publication